

SEKALOV, F.G.

Experience in the operation of the automatic communication
equipment in the Vilnius long-distance telephone exchange.
Vest. svyazi 24 no.12:16-18 D '64 (MIRA 18:2)

1. Nachal'nik Vil'nyusskoy mezhdugorodnoy telefonnoy stantsii.

43475

S/205/62/002/006/001/021
E027/E410

AUTHORS:

Polivoda, A.I., Sekamova, Ye.N.

TITLE:

Ultraweak radiation (400 - 700 mμ) of surviving and homogenized liver tissue under normal conditions and under the influence of ionizing radiation

PERIODICAL: Radiobiologiya, v.2, no.6, 1962, 801-810

TEXT: The authors have previously observed that living mouse liver emits ultraweak radiation in the visible region (450 - 700 mμ) which can be detected with a photomultiplier, and in the present work they have used this radiation as an index of changes taking place in the tissues under the influence of ionizing radiation. The apparatus used is shown in Fig.1 and consists of a photomultiplier (1) immersed in liquid nitrogen in a specially designed vacuum flask (2) with a hole in the side through which the end of the photomultiplier projects, thus avoiding loss of light due to passage through the walls of the flask. The photomultiplier has a small nontransparent photocathode, giving low noise and high quantum yield. The condensing system consists of a quartz lens (3) and a diaphragm (4). The tissue to be examined is

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Ultraweak radiation ...

placed in a cuvette (6). The electronic arrangements are of standard type. The normal liver of an intact mouse exposed at operation emitted about 1000 photons/sec.cm² (average value for 135 mice), representing an energy of 2.5×10^{-6} erg/sec-l/cm⁻³ or 2.5×10^{-10} of the total energy output of the tissue. The radiation was greatly reduced 5 hours after the death of the animal or when the tissue was removed and homogenized. After an initial rise it declined during the first 4 days after exposure of the animal to a lethal dose of ionizing radiation. Liver homogenates began to radiate when the temperature was raised, attaining maximum intensity at 60°C and falling to zero at 70°C. This was attributed to thermal decomposition of peroxides. During radiation sickness the radiation of liver homogenates at 60°C rose to a maximum after 2 to 3 days and declined thereafter. There are 5 figures and 4 tables.

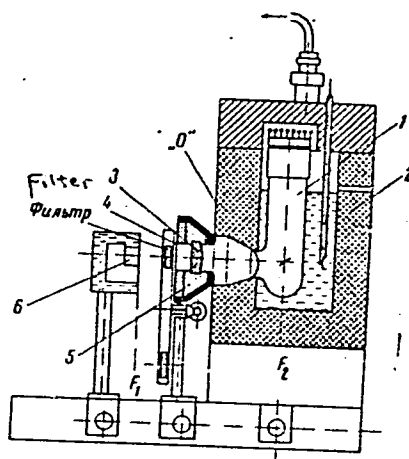
SUBMITTED: December 28, 1961

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Ultraweak radiation ...

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Fig.1.



Card 3/3

MIKHAYLOVA, A.A.; MIKHAYLOV, L.M.; POPOV, A.S.; SEKANOVA, Ye.N.

Y Irradiation of cell cultures of mammals in vitro. Radio-
biologiya 5 no.4:627-628 '65. (MIRA 18:9)

VEDENOVSKIY, V.S.; SIKHOMOVA, Ye.N.; TIMOSHEV, V.N.

Mechanism of superweak spontaneous luminescence of organisms.
Biofizika 8 no.1:125-127 '63. (MIRA 17:8)

TARUSOV, B.N.; POLIVODA, A.I.; ZHURAVLEV, A.I.; SEKAMOVA, Ye.N.

Ultraweak spontaneous luminescence in animal tissues. Tsitol-
logia 4 no.6:696-699 N-D'62 (MIRA 17:3)

1. Akademiya meditsinskikh nauk SSSR, Moskva.

POLIVODA, A.I.; SEKAMOVA, Ye.N.

Localization of primary reactions of radiation injury in sub-
microscopic tissue structures. Trudy MOIP. Otd. biol. 7:122-
126 '63. (MIRA 16:11)

8

CO

New data on lepidolite from Rožná, Moravia. JOSEF ŠKEMANINA AND JOSEF VYELOU:
 III. *Acta Soc. Sci. Nat. Moraviae* (Brno) 5, Pt. 2, 25-31 (1928); *Mineralog. Abstracts*
 4, 379-80.—Analyses of pink lepidolite from Rožná gave: SiO₂ 47.63, Al₂O₃ 28.69,
 FeO, trace, FeO 0.33, MnO 0.75, MgO 0.18, CaO 0.35, Na₂O 1.05, K₂O 11.29, Li₂O 4.87,
 F 0.81, H₂O (+105°) 1.28, H₂O (-105°) 0.31%, the analysis agreeing with H₂Li,
 (K,Na)₂Al₂Si₂O₁₀F₂.

ASME SLA METALLURGICAL LITERATURE CLASSIFICATION

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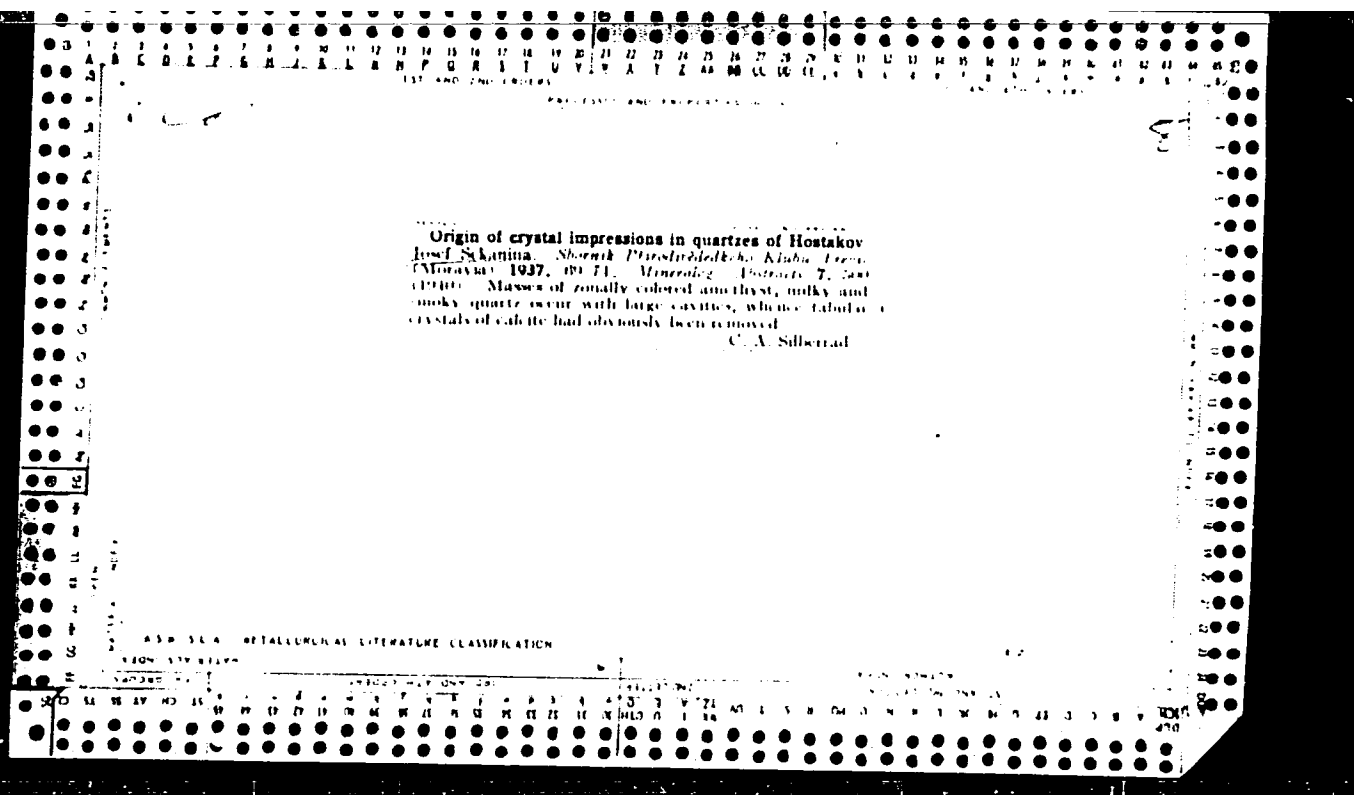
The pegmatite of Hrdisko near Rožna. J. ŠKARNINA. *Přiroda, Brno* 23, 374-6 (1930); *Neues Jahrb. Mineral. Geol. Referate* 1, 1931, 535. cf. C. A. 26, 1879. -On the basis of the discovery of lepidolite, the pegmatite is classed not as a simple body but as a mixed older schorl-pegmatite and younger Li-pegmatite J. F. SCHAIERER

ASB S.A. METALLURGICAL LITERATURE CLASSIFICATION

[illegible]

The sulfur localities of Mähren and their paragenesis
 for Sekanina. *Zpravy komise na pěst. vědum Moravy a
 Slezska Mineral.* No. 6, 29 pp. (1935) (German Summary);
Neues Jahrb. Mineral. Geol., Referate 1, 1936, 468.
 α-, β- and γ-Sulfur crystals are described. Near Zlatonice
 S is formed by the decompn. of gypsum I. F. S.

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																										MATERIALS INDEX																									
Brushite in an ossuary. J. Sekanina. <i>Pub. facult. sci. univ. Masaryk Brno</i>, 220, 1-12(1935); <i>Neues Jahrb. Mineral., Geol.</i>, Ref. 1, 1938, 306-7. Brushite occurs in hollows in bones in the old crypt of the church of Bítov (Moravia), partly in idiomorphic crystals, partly in radiate aggregates; d. 2.328, n_D^{20} 1.54, n_D^{25} 1.548. It loses 21.40 at 190°. C. A. Silberrad																										8																									
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1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX

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1

Metallographic study of minerals from Píšťbram, Czechoslovakia. J. Šekanina. *Bull. soc. trans. mineral.* 60, 152-223 (1937).—Measurements of reflecting power and the behavior toward etching agents, of certain minerals, the effect of light on argyrite, polybasite and stephanite and the results of a detailed examn. of polished sections of 43 minerals, are recorded. R. C. P. A.

OPEN
CROSS-SECTION
METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX

Occurrence of lithium and phosphate minerals at Dobrá Voda near Velké Meziříčí, Josef Sokolova (Masaryk Univ., Brno). *Věstník Státního ústavu geologického*, 21, 200-312 (1946). A pegmatite contained quartz, albite, perthite, muscovite, lepidolite, apatite, tourmaline, cookeite, and amblygonite. Optical data are given for the last 10 of these minerals. — Michael Fleischer

CA

8

Minerals and rocks of the region between Nedvědice and Rožna. Josef Sekanina. *Sborník Klubu Přírod. v Brně* 26, 99-113(1948); *Mineralog. Abstracts* 10, 120 (1947). Axinite from metamorphic rocks, and lepidolite and tourmaline from pegmatite are described. The Li minerals occur in a pegmatite that cuts on older vein of pegmatite and aplite. Partial mixing of both pegmatites appears to have taken place at the borders. M. F.

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED	REF	INDEXED	FILED	DATE	BY	CLASS	NO.	DATE	BY	CLASS	NO.

CA

8

Pneumatolytic-hydrothermal mineral veins at Horní Bory. Josef Šekanina. *Sborník Přírod. Klubu v Třebíči* (for 1939-44) (Pub. 1947) 81-7; *Mineralog. Abstracts* 10, 120(1947).—A primary pegmatitic phase is characterized by tourmaline, albite, and molybdenite; a later hydrothermal phase by younger quartz and albite, together with muscovite, chlorite, rutile, ankerite, and rare millerite.
Michael Fletcher

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

8

CA

Amblygonite and zerkowite at Mozná, Czechoslovakia.
Josef Sekanina (Masaryk Univ., Brno, Czech.). *Práce
Moravsk. Akad. Ved. Přírod.* 22, 211-18 (1950) (French
summary). Optical and x-ray powder data are given for
these minerals. Michael Fleischer

Mineralogical Chemistry - 8.

Minerals of the iron gossan near Nová Ves, northern Moravia. Josef Škarnina (Masaryk Univ., Brno, Czech.). *Prace Moravskoslezské Akad. Přírodních 23*, 107-115 (1951) (French summary).--Crystallographic and optical data are given for goethite, lepidocrocite, anglesite, cerussite, pyromorphite, malachite, lunarite, dundasite, smithsonite, hemimorphite, hydrozincite, chalcantite, goslarite, and greenockite. Michael Fleischer

SEKANINA, JOSEF

Mineralogie vseobecna. [Vyd. 1.] Praha, Statni pedagogicke nakl., 1953. (Ucebni texty
vysokych skol) [General mineralogy. I. Morphological crystallography. Illus.]

SO: Monthly List of East European Accessions, vol.3, No.2, Library of Cong., Feb. 1954, Uncl.

~~SEKANINA~~
SEKANINA,
CZECHOSLOVAKIA / Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, No 7857

Author : Sokanina, J.

Inst : Not given

Title : Brushito and Probable Ardealito on Bone Remnants in Olomouts
[sic]

Orig Pub : Casop. Mineral. a Geol., 1956, Vol 1, No 1, 50-53

Abstract : Two rare phosphates, brushito ($\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$) and ardealito ($\text{CaHPO}_4 \cdot \text{CaSO}_4 \cdot 4\text{H}_2\text{O}$), found on decomposing human bones in the Santa Clara monastery, are described. Brushito occurs in the form of incrustations and aggregates of fine (0.5 mm) crystals of elongated leaf-like form. This is the eighth instance of brushito occurrence on the territory of Czechoslovakia, and points to the relatively extensive occurrence of this mineral. The physical and optical properties of the indicated minerals were determined and qualitative analyses were run on them.

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CZECHOSLOVAKIA / Physical Chemistry. Crystals. B

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001547710011-4"

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41391

Author : Sekanina, Josef

Inst : Not given

Title : Crystallographic Terminology

Orig Pub : Casop. mineral. a geol., 1958, 3, No 3,
345-349

Abstract : A list of 65 crystallographic terms in the Czech language is presented.

Card 1/1

BERANIAN, J.

"Crystallographic terminology."

ČASOPIS PRO MINERALOGII A GEOLOGII., Praha, Czechoslovakia., Vol. 4, No. 1, 1959

Monthly list of EAST EUROPEAN ACCESSIONS (BEAI), LC, Vol. 8, No. 7, July 1959, Unclass

SEKANINA, Josef

~~On the occasion of~~ the 60th birthday of professor Jiri Novak. Vestnik
ust geolog 37 no.6:483 N :62.

CZECHOSLOVAKIA

SEKANINA, J.

Prague, Casopis pro mineralogii a geologii, No 2, 1963, pp
178-187

"Magnesia Skarn in Dolomite from Cichov in Western Moravia."

SEKANINA, Josef, prof., dr. (Sumavska 30, Brno)

Calcite from Stramberk; a morphologic and crystallogenic study. Prace CSAV Brno 34 no.12:541-598 '62.

1. Clen korespondent Ceskoslovenske akademie ved.

SEKANINA, Iosif [Sekanina, J.]

Interference pleochroism. Min. sbor. no.16:387-391 '62.
(MIRA 16:10)

1. Universitet imeni Yana Ev. Purkine, Brno, Chekhoslovakiya.
(Crystal optics)

SEKANINA, Josef

Magnesia skarn in the dolomite near Cichov in western
Moravia. Gas min geol S no.2:173-188 Ap '63.

SEKANINA, Josef

On the ontogeny of calcite from Stramberk and on calcite
in general. Cas min geol 8 no.2:217-219 Ap.'63.

SEKANINA, Josef

Sixtieth birthday of Jaroslav Kokta. Vest ust geol 39 no.2:
153 Mr'64

SEKANINA, Josef,

Nomenclature of geological sciences in Czechoslovakia and its
tasks. Vest Ust geol 39 no.4:303-306 '64.

CZECHOSLOVAKIA

SEKANINA, J.

J. E. Purkyne University (Universita J. E. Purkyne), Brno

Prague, Casopis pro mineralogii a geologii, No 3, 1964, pp 371
- 373

"Report on the Activity of the International Mineralogical
Association in 1962 and 1963."

SEKANINA, Josef

Report on the activity of the International Association of Mineralogy
in the years 1962 and 1963. Cas min geol 9 no.3:371-373 '64.

I. J. L. Pichard University, Brno.

SEKANINA, M.; SEKANINOVA, M.

Epidemic of diarrhea in a pediatric department caused by *Pseudomonas aeruginosa*. *Cesk.pediat.* 15 no.3:230-233 Mr '60.

1. Detske oddeleni OUNZ v Novem Meste na Mor., prim. MUDr.
J. Zemanek.

(PSEUDOMONAS INFECTIONS in infancy & childhood)
(DIARRHEA in infancy & childhood)

SEKANINA, M.

Complete systems of the neighborhood of sets in general topologic spaces.
p. 135. (SPISY, No. 374, 1956, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (BEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

SEKANINA, M.

Certain characteristics of compact related sets in Euclidean space.

p. 129 (CASOPIS PRO PESTOVANI MATEMATIKY) Vol. 82, no. 2, May 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

SEKANINA, Milan (Brno)

On a certain problem of a set of independent elements of an Abelian
group. Cas pro pest mat 85 no.3:338-341 Ag '60. (EEAI 10:1)
(Abelian groups) (Aggregates)

SEKANINA, Milan (Brno, Kotlarska 2)

A remark on factorization of non-commutative groups. Cas pro
pes mat 87 no.1:94-97 '62.

1. Prirodovedecka fakulta university J.E. Purkyne.

POLAK, Vatslav [Polak, Vaclav]; SEKANINA, Milan

On decomposition of the plane into system of subsets of topological circles. Cas pro pes mat 88 no.1:14-28 '63.

1. Prirodovedecka fakulta, Universita J.E.Purkyne, Brno,
Kotlarska 2.

SEKANINA, Milan

On an ordering of the vertices of a graph. Cas pro pest mat
88 no.3:265-282 Ag '63.

1. Prirodovedecka fakulta university J.E. Purkyne, Brno,
Kotlarska 2.

SEKANINA, Milan

On factorization of a set of nonnegative integers. Chekhosl mat
zhurnal 14 no. 2:161-170 '64.

1. Faculty of Natural Sciences, J.E.Purkyne University, Brno,
Kotlarska 2.

SEKANINA, M.

Four cases of arrhythmia in newborn infants. Cesk. pediat. 19
no.7:627-630 JI'64

1. Detske oddeleni nemocnice v Novem Meste na Mor; vedouci:
MUDr. J. Zemanek.

SEKANINA, Milan

Systems of topology on a given set. Chekhosl mat zhurnal
15 no.1:9-29 '65.

1. J.E.Purkyne University, Brno, Janackovo nam.2A. Submitted
January 12, 1963.

SEKANINA, VLADIMIR

V 2301* For Better Quality of Safety Razor Blades. Za lepší
MG jakost holčesek čepelek. (Czech.) Vladimír Sekanina. Hutnické
listy, v. 10, no. 11, Nov. 1955, p. 665-673.
Czechoslovakian methods for producing razor blades are com-
pared with procedures in other countries. Tight production
control measures are required to make a high quality product.
Tables, micrographs, diagrams. 5 ref.

WIEDERMANN, Milos, MUDr; SEKANINA, Zdenek, MUDr

Sheehan's syndrome. Ces.lek.cesk. 95 no.33-34:925-929 24 Aug 56.

1. I. interni klin. PU Olomouc--Predn. Prof. MUDr Pavel Lukl
M.W.I. int. klinika PU, Olomouc
(PITUITARY GLAND, ANTERIOR, dis.
Sheehan's synd. (Cz))

SEKANINA, Z.

SCIENCE

Periodicals: BULLETEN ASTRONOMICIESKIKH INSTITUTOV CEEKOSLOVAKII
BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA.
Vol. 10, no. 2, Mar 1959

SEKANINA, Z. Variability of the photometrical exponent of the dust
part of the cometary coma. In English. p. 60.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5,
May 1959, Unclass.

SERANINA, Z.

Solar activity as related to the statistics of comets. In English.
p. 103.

BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA. (Ceskoslovenska akademie
ved. Astronomicky ustav) Praha, Czechoslovakia, Vol. 10, no. 3, May 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959
Uncl.

SEKANINA, Z.; VANISEK, V.; GRYGAR, J.

Initial velocity in the tail of comet 1956h. In English. p. 115.

BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA. (Ceskoslovenska akademie
ved. Astronomicky ustav) Praha, Czechoslovakia, Vol. 10, no. 4, July 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959
Uncl.

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3.2440 (1060)

AUTHOR: Sekanina, Zdeněk (Prague)

TITLE: The study of physical properties of the cometary atmosphere

PERIODICAL: Pokroky matematiky, fyziky a astronomie, no. 1, 1961, 3 - 15

TEXT: The author summarizes achievements in the study of the atmosphere of comets to supplement a previous article on the physical structure of comets by V. Vanýsek (Pokroky matematiky, fyziky a astronomie 1 (1956), no.2, p. 156). The dependence of the absolute surface temperature of a comet's nucleus on the heliocentric distance, according to Markovič, can be expressed by the function $T(r) = T_0 \cdot r^{-\alpha}$, where r is the heliocentric distance; T_0 (the absolute temperature in a heliocentric distance of 1 AU) and α are parameters for which Markovič lists the following values given in Table 1. Some surface temperatures of cometary nuclei (ice + meteoric material conglomerate) and of

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very fine dust particles under conditions of thermal equilibrium are listed in Table 2. Various studies indicated that the cometary atmosphere is not a homogeneous physical medium, and a so-called gas-dust model of a comet was proposed by Vanýsek and collaborators. It is based on the assumption that the emission of a comet is caused by both gas molecules (fluorescence) and dust particles, in addition to the nucleus (which reflects the sunlight), so that the total photometric exponent (n), i. e. the instantaneous change of the total brightness of the coma in a given heliocentric distance, can be expressed by the two partial exponents (n_g) and (n_d). The correlation between the amount of molecules (n_0) liberated per time unit from a unitary surface area of the nucleus and its surface temperature is given by the Levin equation $n_0 = N_0 \cdot \left(\frac{kT}{2\pi m} \right)^{1/2} \cdot e^{-\frac{L}{R_0 T}}$, where N_0 is the

molecule concentration in the surface layer of the nucleus, k the Boltzmann constant, R_0 the gas constant, T the absolute sur-

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face temperature of the nucleus, and L the temperature required for the liberation of a certain amount of gas. There is still no definite answer as to the existence of dust in a comet's atmosphere. Sekanina found a combination of major parameters of dust contained in the atmosphere of a comet (so-called dust function) which allows the photometric exponent of the dust coma to be determined when all the parameters are known:

$$n_d = 2 - \frac{r}{\sqrt{r + \left(\frac{R}{\varrho}\right)^2}} \cdot \frac{d\sqrt{r}}{dr}$$

where R is the effective radius of the cometary nucleus, ϱ the radius of the dust particles, and $\sqrt{r}$ the total of the photometrically effective dust particles in the coma in a given heliocentric distance. Vanysek calculated values for $\varrho \sim 2 \cdot 10^{-5}$ cm, and assumes that the total amount of matter ranges from 10^{10} to

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10¹¹ gram in the dust layer and from 10¹⁶ to 10²¹ gram in the nucleus. The Bessel model of the shape of a comet was replaced by another theory proposed by Orlov, who assumes that the movement of each particle (i. e. molecules and dust) is influenced by the following three forces: (a) gravitation of the Sun; (b) repulsion of the Sun (pressure of solar radiation); and (c) the pressure of the radiation reflected from the surface of the comet's nucleus. According to the Orlov model, the resulting distance from the peak of the comet's head to its nucleus is then

$$\xi_0 = (2r)^{\frac{1}{2}} \cdot \left(\frac{\mu_1}{1 + \mu} \right)^{\frac{1}{2}} \text{ where } 1 + \mu \text{ is the repulsion of the}$$

Sun, and μ_1 the effective acceleration per molecule in direction from the nucleus. Orlov also assumes that the acceleration effected by the Sun and the comet's nucleus are proportional to the illumination produced by the two bodies and formulates:

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$$\frac{10^{-0.4 h_0}}{10^{-0.4 H_0}} = \frac{\mu_1}{1 + \mu}$$

an expression which allows the stellar size of the nucleus (h_0), to be determined since the stellar size of the Sun (H_0) is known and the ratio of the two accelerations can be derived by observing the motion of peaks (so-called envelopes) in the coma. Orlov also found that one comet can have up to four such envelopes which always have definite distances from the nucleus in the ratio $\xi_1 : \xi_2 : \xi_3 : \xi_4 = 1 : 2.4 : 3.9 : 5.6$. From the deformation and irregularities of envelopes observed in the coma of the Morehouse 1908 III comet, Orlov concluded that the gas emission from the nucleus is not continuous, but occurs in form of explosions. This is contradicted by Dobrovolskiy, who stated that the envelopes in the coma of the Morehouse comet contained ionized CO^+ (so that the electromagnetic forces must be considered in the

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calculation) and that envelopes are not exclusively gaseous formations, but contain also dust particles. According to Dobrovolskiy, so-called parent molecules (M) are liberated from the dust particles. These molecules do not radiate themselves, but they dissociate rapidly under the influence of solar corpuscular radiation: $H^+ + M \rightarrow H + M^+$; neutral CO is the parent molecule and electrons liberated by its ionization are dragged into the stream of solar corpuscular radiation, thus creating an electrostatic field which acts on the luminous CO^+ ions. Halos, sometimes observed in the heads of comets are caused by larger amounts of particles, ejected from the nucleus into all directions. Precise studies on the geometry of this phenomenon were made by Mochnač. The author describes now the physical development of the atmosphere of a comet: At large distances from the Sun, the surface temperature of the cometary nucleus is very low ($-100^\circ C$ and less) and the comet remains practically inactive. As the comet approaches the Sun, the surface of the nucleus is heated and the first gases are liberated at Sun-comet distances of 3 -

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2 AU. The extension of the comet increases rapidly and the entire area which can be filled with gases is "saturated" at Sun-comet distances of 1-2 AU. Three individual stages are distinguished in the development of a cometary atmosphere: (1) Until to the moment when intensive evaporation of frozen gases sets in; (2) Until to the moment when the atmosphere is saturated; and (3) The stage of the "saturated" coma. The most important parameters of the development are heliocentric "limit" distances which, in turn, are influenced by the dimensions and composition of the cometary nucleus. Comets can also be classified as "old" and "new" according to the number of orbits around the Sun, since the lifetime of comets depends on the length of orbiting periods. The best evidence for determining the age of a comet is the curve of its atmospheric development (i. e. its "limit" heliocentric distances). However, such curves are as yet established only for few comets. In conclusion, the author states that theoretical studies of processes occurring in the coma and improved observation instruments will greatly contrib-

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ute to the further development of cometary physics. [Abstrac-
ter's note: Papers of cited authors are not listed]. There
are 5 tables and 5 figures.

Předpokládaná struktura jádra	Před periholem 4		Po perihelu 5	
	T_0	α	T_0	α
led H_2O 2	157°K	0,23	162°K	0,18
konglomerát ledu H_2O + těžko tavitelného meteorického materiálu 3	151°K	0,18	166°K	0,17

Table 1 Legend: 1) Assumed structure of the comet's nucleus
2) Conglomerate of H_2O ice and difficultly fusible
meteoric material 3) H_2O ice 4) Before perihelion
5) After perihelion

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S/035/62/000/004/021/056
A001/A101

AUTHOR: Sekanina, Z.

TITLE: Visual effects following the landing of Lunik II on the Moon

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 4, 1962, 64,
abstract 4A536 ("Ríše hvězd", 1961, v. 42, no. 2, 27-30, Czech)

TEXT: This is a summary and survey of visual effect observations connected
with the landing on the Moon's surface of the second Soviet space rocket on
September 14, 1959. It is compiled mainly on the basis of data in the article
by O. B. Dluzhnevskaya (RZhAstr, 1961,*12A591). ✓

V. B.

[Abstracter's note: Complete translation]

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SEKANINA, Z.

Secular variations in the absolute brightness of short-period comets. Biul astr Cz 15 no.1:1-7 '64.

Perihelion asymmetry of photometric curves of comets. Ibid.:8-20.

1. Public Observatory, Prague.

L 45085-66

ACC NR: AP6026464 SOURCE CODE: CZ/0092/66/017/002/0067/0084

AUTHOR: Sekanina, Z.

ORG: Public Observatory, Prague

TITLE: New original and future comet orbits

SOURCE: CSAV. Byul astron inst Chekhoslov, v. 17, no. 2, 1966, 67-84

TOPIC TAGS: comet, comet orbit/Zuse Z23 digital computer

ABSTRACT: The author discusses current methods used to determine original and future comet orbits, and computes the original and future orbits for four comets of the 1940's and 1950's according to a method of his choice. They are namely: 1949 I (Wirtanen), 1949 IV (Bappu-Bop-Newkirk), 1953 III (Mrkos-Honda) and 1958 III (Burnham). The author also establishes the future orbits for comets 1905 IV (Kopff), 1905 VI (Brooks) and 1946 VI (Jones). A brief description of each comet follows and the results of the computations are given in the form of tables in the original article. In addition, the value of the auxiliary-anomaly coefficient of Makover's method [Makover, S. G., 1955, BIA 6, 244] is discussed

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ACC NR: AP6026464

as a function of the heliocentric distance of the perihelion. The author thanks
Miss I. Strakova for her careful tape-punching for the Zuse Z23 digital computer.
Orig. art. has: 14 formulas and 11 tables. [GC]

SUB CODE: 03, 09/ SUBM DATE: 13Sep66/ SOV REF: :008/ OTH REF: 011/

Card 2/2 E13

JANICEK, M.; SEKANINOVA, H.; VACLAVSKY, J.

Relation of smoking to the incidence of hypertension. Cas. lek.
cesk. 103 no.24:659-662 12 J#164

1. I. vnitřní klinika lékařské fakulty PU [Palackého university]
v Olomouci; přednosta: prof. dr. P. Lukl.

JANICEK, M.; KUBIS, M.; JANOUSEK, M.; SEKANINOVA, H.

Effect of obesity and some dietary components in the pathogenesis of hypertension. Vnitřní lek. 11 no.2:130-138 F '65

1. I. vnitřní klinika Palackého University, Olomouc (prednosta: prof. MUDr. P. Luk).

MACQUEEN, J.; TIGHT, J.; SHANAHAN, M.; LONNIE, J.

The significance of expanding the blood and liver lesions
in infectious hepatitis. *Virchows Arch. B* 11 no. 4:374-381
Apr 1975.

1. J. MacQueen (Director, Institute of Virology, University of Glasgow) (pre-
sented: Prof. Dr. Peter. J. Smith); Peter L. Lonnie (Faculty of Medicine,
University of Glasgow) (presented: Prof. Dr. Bruno Schuber, (Ed.))

WONDRAK, Ed.; SEKANINOVA, J.

On treatment of fractures of the tibial condyle. Acta chir. orthop. trauma. Cech; 28 no.6:491-498 D '61.

1. Chirurgicka klinika lekarske fakulty Palackeho university v Olomouci prednosta prof. MUDr. Vlad. Rapant, Dr. Sc. Rehabilitacni oddeleni fakultni nemocnice v Olomouci, prednosta MUDr. Karel Tabarka, C.Sc.

(TIBIA fract & disloc)

SEKARDI, Ljerka; EHRILCH, Ivo

Acetylcholinesterase of Fasciola hepatica L.
Biol glas 15 no. 4: 229-233 '62.

1. Institut za biologiju Sveucilista u Zagrebu.

SEKARDI, M.

Cooling water supplies in chemical industry. M. Sekardi (Nafta, Zagreb, 1934, 8, 83-89).--Needs, sources, and ~~requirements~~ of cooling water in different branches of chemical industry are discussed. Methods of re-cycling with cooling in spray towers are described and some design problems are outlined.

S. K. LACHOWICZ.

11(4)
AUTHOR: Sekardi, Marijan, Engineer YUG/4-59-1-1/16
TITLE: Columns With Bubble-Cap Plates. I. (Kolone sa zvonastim pliticama. I)
PERIODICAL: Nafta, 1959, Nr 1, pp 1-10 (YUG)
ABSTRACT: The article gives detailed description of the mechanical composition and function of fractionating columns with bubble-cap plates. Calculations of various factors which influence the efficiency of bubble-cap plates are based on English and American methods and formulas. There are 8 graphs, 3 diagrams and 9 references of which 7 are English, 1 German and 1 Yugoslav.
ASSOCIATION: Institut za naftu - Zagreb. (Institute for Petroleum - Zagreb)

SEKARDI, K.

Towers with sieve trays. p. 231.

AFPA. (Institut za raftu)
Zagreb, Yugoslavia
Vol. 10, no. 7, July 1959.

Monthly list of Eastern European Accession Index (EAI) vol. 1, No. 11
November 1959
Encl.

SEKATSKIY, A.

How we learned to use the "Donbas" cutter-loader. Mast. ugl. 5
no. 4:7-8 Ap '56. (MLRA 9:7)

1. Nachal'nik uchastka shakhty No. 9 "Lipkovskaya" kombinata
Tulaugol'.

(Moscow Basin--Coal mining machinery)

KOLAR, Z.; DEVELIC, GJ.; RANDIC, M.; TRINAJSTIC, N.; SEKE, V.

Book reviews. Croat chem acta 35 no.4:315-319 '63.

1. Clan Redakcionog odhoda, "Croatica Chemica Acta" (for Randic).

SEKE, Vesna

Means for the increase of viscosity of photographic emulsions. Kem
ind 10 no.1:F-18—F-21 Ja '61.

1. "Fotokemika", Zagreb.

ACC NR: AP6032806

SOURCE CODE: YU/0001/66/000/009/1594/1600

AUTHOR: Seke, Vesna (Graduate engineer; Consultant); Fles, Dragutin (Doctor; Director)

ORG: Organic Chemistry Industry, Zagreb (Organsko kemijska industrija)

TITLE: Study of optically active polyamides. II. Synthesis of optically active poly- γ -methyl- ϵ -caprolactam [First part appeared in Croatica Chimica Acta, 1966, No. 1, entitled: "The Absolute configuration of γ -methyl- ϵ -caprolactam"]

SOURCE: Tehnika, no. 9, 1966, 1594-1600

TOPIC TAGS: polymer, polymerization, monomer, optically active polymer, polyamide

ABSTRACT: A survey of methods for the preparation of optically active polymers is given. In the experimental part the polymerization of optically active and racemic γ -methyl- ϵ -caprolactam from (S) (+) γ -methyl- ϵ -caprolactam and (R) γ -methyl- ϵ -caprolactam is described. (S) (+) γ -methyl- ϵ -caprolactam is obtained by two different methods: the first by conversion of optically active

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UDC: 678.675=861

ACC NR: AP6032806

α -methyl- ϵ -phthalimidobutyric acid to γ -methyl- ϵ -phthalimidocaproic acid through two Arndt-Eistert syntheses; the second, by the resolution of γ -methyl- ϵ -phthalimidocaproic acid via diastereomeric quinine salt. The first method was used for determination of the absolute configuration of γ -methyl- ϵ -caprolactam, while the second was applied as a convenient preparative method for the preparation of optically active caprolactam. Polymerization of racemic and optically active monomers of high purity was carried out at 210C for 90 hr using 1% of water as a catalyst. Polymer yields were 59% for the optically active monomer, and 41.5% for the racemic monomer. Infrared spectra, intrinsic viscosity, and the influence of the solvent's composition on the specific rotation is given. Specific rotation of (S) (+) poly-(γ -methyl- ϵ -caprolactam) showed a sharp maximum at 30 vol % of chloroform in m-cresol. Orig. art. has: 4 figures. [Based on authors' abstract] [KS]

SUB CODE: 07/SUBM DATE: none/ORIG REF: 001/SOV REF: 002/OTH REF: 031/

Card 2/2

SEKE, Vesna (Zagreb)

Fixing baths. Kem ind 10 no.7:Suppl. F-71--F-80 J1 '61.

VAN ~~DORMAEL~~, A.; NYS, J.; DEPOORTER, H.; SEKE, V. [translator]

New group of sensibilizers for photographic emulsions. Kem
ind 10 no.11;443-444 N '61.

SEKEI, I.

SABO, I.; MODI, Y. [Modi, I.]; SEKEY, Ya. [Sakai, I.] (Tyrgu-Muresh, Rumyniya)

Effect of silicic acid and silica on blood lipoids. Pat.fiziol.
i eksp. terap. 5 no.3:74-75 My-Je '61. (MIRA 14:6)

1. Iz nauchno-issledovatel'skoy bazy (rukovoditel' - akademik
D. Mishkol'tsi) Akademii nauk Rumynskoy Narodnoy Respubliki
i kafedry fiziologii (rukovoditel' - dotsent I.Sabo) Mediko-
farmatsevticheskogo instituta.
(LIPIDS) (SILICA)

SANTO D'YERD' [Santo György]; SEKEL', Otto

Severe injuries of the chest with disturbance of its function and treatment by prolonged artificial respiration with the aid of respiratory apparatuses. Khirurgia 35 no.10:79-84 0 '59.

(MIRA 12:12)

1. Iz Gosudarstvennogo instituta travmatologii (dir. - doktor Santo D'yerd'), Budapesht.

(THORAX wds & inj.)

(RESPIRATION, ARTIFICIAL)

SEKELJ, Antonije, pukovnik

Protection of medical installations from ground and air attack.
Voj. san. pregl., Beogr. 11 no.11-12:697-700 Nov-Dec 54.

1. Katedra vojnih i vojnosanitetskih predmeta VMA.

(CIVIL DEFENSE

med. installations, protection from ground & air attack)

(MEDICINE, MILITARY AND NAVAL

med. installations, protection from ground & air attack)

10

The development of the nomenclature of organic compounds. Aleš Sekera. *Chemie (Prague)* 4, 2-3(1948).
S extends the application of the simplified Dyson system
of naming org. compds. . . . Frank Maresh

CA

.....
The Raney catalysts. Ales Sekera. *Chemie* (Prague) 5,
5-7(1949).—In hydrogenation the use of the catalysts Co,
Fe, Cu instead of Ni does not permit uniform conclusions.
These catalysts require a longer reaction time, higher
temps., and higher pressures, but they produce fewer side
reactions than does Ni and consequently yield purer prod-
ucts. Frank Maresh

CA

17

Anesthetics of carbamic acid series... A. Sekera, J. Hrubý, Č. Vrba, and J. Lebdulka (Masaryk Univ., Brno, Czech.). *Chem. Listy* 44, 275-6 (1950).—From excess RNCO and $\text{Et}_3\text{NCH}_2\text{CH}_2\text{OH}$, the following $\text{RNHCOOCH}_2\text{CH}_2\text{NEt}_3$ compds. were obtained by heating in toluene, filtering off the disubstituted urea after a few days standing, and pptg. the product with dry HCl in the form of its HCl salt in 80-90% yield. B.ps. of RNCO and m.ps. of $\text{RNHCOOCH}_2\text{CH}_2\text{NEt}_3\cdot\text{HCl}$ are given for the different R values Ph (b₄ 48-9°, m. 146.5°), 1-naphthyl (b₄ 130-1°, base m. 60.5°, picrate 134°), 2-naphthyl (m. 56.5°, m. 160°, picrate 191.5°), o-tolyl (b₄ 63-4°, m. 168.5°), m-tolyl (b₄ 55-7°, m. 134.5°), p-tolyl (b₄ 49-51°, m. 188°), 2,4-dimethylphenyl (b₇ 76-8°, m. 161°), p-MeOC₆H₄ (b₄ 98-100°, m. 171.5°), p-EtOC₆H₄ (b₄ 100-1°, m. 173°). In addn., Ph₂NCOOCH₂CH₂NEt₃ (m. 180°) was prepd. from Ph₂NCOCI (m. 84°). Anesthetic action was 0-0.3 as compared to 1 of cocaine. M. Hudlický

SEKERA, A.

Certain new problems in the investigation on local anesthetics. Lek.
listy, Brno 6 no.19:565-570 1 Oct 51. (CIML 21:4)

1. Of the Institute of Pharmacological Chemistry of Masaryk University
Brno.

CH

17

Anesthetics from carbamic acid series. II. A. Sekera,
A. Borovanský, and Č. Vrba (Masaryk Univ., Brno,
Czech.). *Chem. Listy* 45, 90 (1951); cf. *C.A.* 45, 3122f.---
By the reaction of $Me_3N(CH_2)_nOH$ with alkyl isocyanates in
ether, the following derivs. of $RNHCOOCH_2CH_2NMe_3$ were
prepd. and characterized by the m.p. of the HCl salts:
Me, m. 117-19°; Et, m. 110°; Pr, m. 89-90°; Bu, m.
97-9°; iso-Pr, m. 128°; iso-Am, m. 112-14°; tert-Bu, m.
157°. No anesthetic activity was noted. M. Hudlický

1957

SEKERA, A.; RAHM, J.

Antural althelminthic drugs; askaridol. *Cesk. farm.* 1 no.8:471-477
Sept 1952. (CML 23:2)

VRBA, C.; LEBDUSKA, J.; SEKERA, A.

Studies on local anesthetics; pharmacological evaluation of active
basic esters of substituted carbamic acids. Cesk. farm. 1 no.10:554-
563 1952. (CIML 23:4)

1. Of the Institute of Pharmacology of the Veterinary School and of
the Institute of Pharmaceutical Chemistry of Masaryk University, Brno.

SEKERA, A.; RAHM, J.

~~SECRET~~

Natural anthelmintics; santonin. Cesk. farm. 1 no. 10:594-598 1952.
(GLML 23:2)

CHIA. A.

Studies in local anesthetics. II. Synthesis of further basic esters of substituted
carboxylic acids. 1952. (Chemické Listy. Praha. Vol. 46, No. 12, Dec. 1952)

CC: 1952- List of East European Anesthetics, (LMA), 13, Vol. 4, No. 6,
July 1952, 1952.

SEKERA, A

SEKERA, A.; RAHM, J.

Natural andtithelminthics. III. Helenin. Gesk. farm. 2 no.1:22-24
Jan 1953. (CML 25:1)

SEKERA, A.

SEKERA, A.; HRUBY, J.; JARUBEC, I.; KRAL, J.; VRBA, C.; LEBDUSKA, J.

Local anesthetics. Basic esters of substituted carbamic acids [with summary in English]. Sbor. Chekh. khim. rab. 18 no. 6: 870-879 D '53.
(MIRA 7:6)

1. Department of Pharmaceutical Chemistry of the University, and
Pharmacological Department of the Veterinary School, Brno.
(Anesthetics) (Carbamic acid) (Esters)

SEKERA, ALES

Local anesthetics. III. Basic esters of monoalkylar-
bamic acids. Ales Sekera, Alois Borovanský, and Ceník
Vrba (Masarykova Univ., Brno, Czech.). *Chem. Listy* 47,
691-7 (1953); cf. *C.A.* 47, 12302e. — 2-Diethylaminoethyl N-
alkylcarbamates (I) prepd. from alkyl isocyanates or by the
Curtius degradation were inactive as local anesthetics. Some
of them showed a slight sedative and hypnotic action upon
white mice. Dialkyl sulfates and KOCN gave MeNCO, b.
42-5° (42%), and EtNCO, b. 59-61° (36%). BuI (0.25
mole) refluxed 20-50 hrs. with 45 g. AgOCN in 200 ml.
Et₂O gave 30% BuNCO, b. 112-13°; Me(CH₂)₃CH:CH-
(CH₂)₃NCO (II), b. 102-3°, was prepd. in 85% yield by
boiling 2 hrs. 30 g. Me(CH₂)₃CH:CH(CH₂)₃COCl in 100
ml. C₆H₆ with 13 g. NaN₃. The I were prepd. by refluxing
0.25 mole RNCO 8-10 hrs. with 35.2 g. Et₃NCH₂CH₂OH (III)
in 100 ml. Et₂O and distg. the mixt. *in vacuo*. The bases
with HCl gas in Et₂O gave the HCl salt, crystd. from Et₂O-
Me₂CO. Alkyls, % yields, and b.ps. of the I, and m.ps. of
the HCl salts: Me, 62, 120°, 117-19°; Et, 77, b. 103°,
110°; Pr (IV), 20, b. 116° (n_D²⁰ 1.4000), 91-2°; Bu, 90,
b. 128°, 97-9°; iso-Pr, 41, b. 110°, 126°; sec-Bu, 20, b.
122°, 112-14°; Me₂C, 25, b. 103°, 157°. CH₂:CHCH₂-
Br and AgOCN gave CH₂:CHCH₂NCO which yielded 26%
CH₂:CHCH₂NHCO, CH₂CH₂NEt₃, b. 121-3° (HCl salt, m.
126-7°), hydrogenated in EtOH over 20% Pd-C, to a
compd. b. 135-40°, the const., with the exception of the
b.p., and the infrared spectrum of which agree with those of
IV. Heating 5 g. III with 5 g. Me₂CHCH₂CON₂ in Et₂O
gave 19% iso-BuNHCO, CH₂CH₂NEt₃, b. 148° (HCl salt, m.
120-8°). Refluxing 8 g. II and 5 g. III 5 hrs. in 30 ml. C₆H₆
gave Me(CH₂)₃CH:CH(CH₂)₃NHCO, CH₂CH₂NEt₃ (V); HCl
salt, m. 103-10° (28% yield). Hydrogenation of V gave
C₁₇H₃₅NHCO, CH₂CH₂NEt₃; HCl salt, m. 110-19° (from
petr. ether-CHCl₃). M. Hudlický

Sekera, A

2597. New method of determining the melting point of hygroscopic substances. A. Sekera and J. Pokorný (*Mikrochim. Acta*, 1954, [3-9], 266-270).—The capillary m.p. tube has a small bulb containing P_2O_5 . The substance of which the m.p. is to be found is introduced into the tube past the P_2O_5 , and the tube is evacuated. After sufficient time to allow complete drying, the tube is sealed at a place beyond the P_2O_5 bulb, which is drawn off. The m.p. is then found in the usual way. The m.p. of nine substances determined by this method were higher than those obtained by the usual procedure. A. J. Max

SEKERA, Ales; POKORNY, Jaroslav

Kofler's block and its use in pharmacy; 1, description and use of the apparatus. Cesk.farm. 4 no.3:146-151 Apr 55.

(MICROSCOPY, apparatus and instruments,

Kofler's block for micromasurement of melting point, use in pharmacy)

SEKERA, Ales; KRACMAR, Josef

Use of Kofler's micromethod in drug control, I; identification of chemical official drugs in Czechoslovakian pharmacopeia I. Cesk. farm. 4 no.4:173-180 May 55.

1. Z ustavu pro farmaceutickou chemii Masarykovy university v Brne.

(PHARMACOPEIA

Czech. 1, drug identification by Kofler's micromethod)

(DRUG INDUSTRY

identification by Kofler's micromethod)

SEKERA, Ales; POKORNY, Jaroslav

Kofler's block and its use in pharmacy; 1, determination of
melting point. Cesk. farm. 4 no.4:194-198 May 55.

(MICROSCOPY

Kofler's block, micromasurement of melting
point, use in pharmacy)

SEKERA, Ales; KRACMAR, Josef

Use of Kofler's micromethod in drug control. II. Identification of chemical official drugs in Czechoslovakian pharmacopeia 1, suppl. 1. Cesk. farm. 4 no.5:232-233 June 55.

1. Z ustavu pro farmaceutickou chemii Masarykovy university v Brne.

(PHARMACOPHIA

Czech. 1, supplement 1, drug identification by Kofler's method)

(DRUG INDUSTRY

control of drugs by Kofler's micromethod)

BOROVANSKY, Alois, ~~SEKERA~~, Ales

Glucochloroloses. I. Preparation of α - and β -glucochloralose.
Cesk.farm. 4 no.6:292-293 J1 '55.

1. Z Ustavu pro chemii farmaceutickou Masarykovy university v
Brne.

(HYPNOTICS AND SEDATIVES, preparation of,
 α - & β -glucochloralose)

SEKERA, Ales; STRANIK, Jan

Glucochloraloses. II. Electrophotometric determination of alpha- and beta glucochloralose. Cesk. farm. 4 no.7:330-333 Sept 55.

1. Z Ustavu pro chemii farmaceutickou Masarykovy university v Brne.

(HYPNOTICS AND SEDATIVES, determination,
 α - & β -glucochloralose, electrophoresis)
(ELECTROPHORESIS,
of α - & β -glucochloralose)

KUCA, Libor; BOROVANSKY, Alois; SEKKERA, Ales

Glucochloralose. 3. Determination of β -glucochloralose in the presence of α -glucochloralose by spectrophotometry in the infra-red region. Cesk. farm. 4 no.8:412-414 Oct 55.

1. Z Ustavu pro chemii farmaceutickou Masarykovy university v Brne.

(HYPNOTICS AND SEDATIVES

α - & β -glucochloralose determ. by spectrophotometry in infra-red region)

(SPECTROPHOTOMETRY

determ. of β -glucochloralose in presence of α -glucochloralose in infra-red region)

(INFRA-RED RAYS

spectrophotometric determ. of β -glucochloralose in presence of α -glucochloralose)

Sekera, A.

Stability and local anesthetic effect in some derivatives of xylocaine. A. Sekera, J. Sova, and C. Vrba (Masaryk Univ., Brno, Czech.). *Experientia* 11, 275-6 (1955) (in English).—Several analogs of ω -diethylamino-2,6-dimethylacetanilide (I) (xylocaine) were studied with respect to the strength of the anilide bond to test the hypothesis that the anesthetic effect of the I-type compds. is a function of the strength of these bonds. The following rate consts. ($\text{sec}^{-1} \times 10^{-4}$) were found for hydrolysis in 5*N* HCl at 99.5° with 0.01*M* initial substrate concn.: carbanilic acid, 2-diethylaminoethanol ester (II) 8.22; 2-methylcarbanilic acid, 2-diethylaminocethanol ester, 3.18 (III); 2,6-dimethylcarbanilic acid, 2-diethylaminocethanol ester, 0.33 (IV); ω -diethylaminoacetanilide, 81.5 (V); ω -diethylamino-2-methylacetanilide, 26.4 (VI) and I, 0.727. The order of effectiveness in surface anesthesia (rabbit cornea) in comparison to 0.01*M* cocaine was II, I, III, IV, V-VI; for infiltration anesthesia (guinea pig) V, VI, III, II, I, IV compared with 0.02*M* procaine.

D. S. F.